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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/716,907	11/20/2000	Geert Florimond Gerard Depovere	PHN 17,772	8131

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EXAMINER

SHERKAT, AREZOO

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 02/13/2004

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/716,907	DEPOVERE ET AL.	
	Examiner	Art Unit	
	Arezoo Sherkat	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-11 are presented for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-3, 5-7, and 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Kurowski, (U.S. Patent No. 6,553,127 and Kurowski hereinafter).

1. Regarding claim 1, Kurowski discloses a method of embedding a watermark in an information signal, comprising the steps:

analyzing a given property of the information signal and determining an actual value of said property (i.e., a texture criterion is evaluated for each block of the data stream)(Col. 6, lines 13-37 and Col. 7, lines 45-67);

associating different watermarks with distinct values of said property and selecting the watermark associated with said actual value for embedding in the information signal (i.e., depending on the state 0/1 of the control signal generated by the block selector 120, multi-plexer 140 will output a block having a watermark embedded therein or a block without a watermark therein)(Col. 6, lines 38-67 and Col. 7, lines 1-23).

2. Regarding claims 2 and 6, Kurowski discloses in which the information signal is a sequence of video images, and said analyzing step comprises:

analyzing a spatial or temporal distribution of luminance values, each distinct distribution of luminance values constituting a value of said property of the information signal (i.e., the selecting means may evaluate the texture criterion in a spatial domain)(Col. 7, lines 7-22 and Col. 4, lines 1-18).

3. Regarding claim 3 and 7, Kurowski discloses in which the information signal is a sequence of audio signal segments, and said analyzing step comprises:

analyzing a shape of the frequency spectrum of said audio segments (i.e., texture criterion of each block), each distinct shape of the frequency spectrum

constituting a value of said property of the information signal (Col. 6, lines 13-37 and Col. 12, lines 29-54).

5. Regarding claim 5, Kurowski discloses a method of detecting a watermark in an information signal, comprising the steps:

analyzing a given property of the information signal and determining an actual value of said property (i.e., in the detector 150, the matching black selector 170 applies the same criterion to the blocks generated by the blocker/buffer 160 as the block selector 120 applies to the blocks generated by the blocker/buffer 115 of the embedder 110)(Col. 9, lines 13-67);

associating different watermarks with distinct values of said property and selecting and detecting the watermark associated with said actual value (i.e., in the detector 150, the matching black selector 170 applies the same criterion to the blocks generated by the blocker/buffer 160 as the block selector 120 applies to the blocks generated by the blocker/buffer 115 of the embedder 110)(Col. 9, lines 13-67 and Col. 10, lines 1-56).

6. Regarding claim 9, Kurowski discloses a watermark embedder for embedding a watermark in an information signal, comprising:

means for analyzing a given property of the information signal and determining an actual value of said property (i.e., a texture criterion is evaluated for each block of the data stream)(Col. 6, lines 13-37 and Col. 7, lines 45-67);

means for associating different watermarks with distinct values of said property and means for selecting the watermark associated with said actual value for embedding in the information signal (i.e., depending on the state 0/1 of the control signal generated by the block selector 120, multi-plexer 140 will output a block having a watermark embedded therein or a block without a watermark therein)(Col. 6, lines 38-67 and Col. 7, lines 1-23).

7. Regarding claim 10, Kurowski discloses a watermark detector for detecting a watermark in an information signal, comprising:

means for analyzing a given property of the information signal and determining an actual value of said property (i.e., in the detector 150, the matching block selector 170 applies the same criterion to the blocks generated by the blocker/buffer 160 as the block selector 120 applies to the blocks generated by the blocker/buffer 115 of the embedder 110)(Col. 9, lines 13-67);

means for associating different watermarks with distinct values of said property and means for selecting and detecting the watermark associated with said actual value (i.e., in the detector 150, the matching block selector 170 applies the same criterion to the blocks generated by the blocker/buffer 160 as the block selector 120 applies to the blocks generated by the blocker/buffer 115 of the embedder 110)(Col. 9, lines 13-67 and Col. 10, lines 1-56).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurowski, (U.S. Patent No. 6,553,127 and Kurowski hereinafter), in view of Miyahara et al., (U.S. Patent No. 6,404,926 and Miyahara hereinafter).

8. Regarding claims 4 and 8, Kurowski does not expressly disclose multi-bit watermark patterns.

However, Miyahara discloses an apparatus and method of processing image data in which the embedded watermark is a combination of two or more basic watermark patterns (i.e., bits) constituting a set of basic watermark patterns being selected from different sets in dependence upon the actual value of the property of the information signal (i.e., assigning different watermark patterns based on the threshold value)(Fig. 4, Col. 10, lines 5-67 and Col. 11, lines 1-15).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teachings of Kurowski with the teachings of Miyahara to include multi-bit watermark pattern which adds an information

accompanied therewith into an image data with the motivation to provide for an easy detection of the watermark (Miyahara, Col. 11, lines 44-58).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurowski, (U.S. Patent No. 6,553,127 and Kurowski hereinafter), in view of Nakano, (U.S. Patent No. 6,510,233 and Nakano hereinafter).

8. Regarding claim 11, Kurowski discloses wherein said watermark embedder further comprises:

a watermark detector for detecting a watermark in an information signal (Fig. 3, element 180), comprising:

means for analyzing a given property of the information signal and determining an actual value of said property (Col. 9, lines 13-67);

means for associating different watermarks with distinct values of said property and means for selecting and detecting the watermark associated with said actual value (Col. 9, lines 13-67 and Col. 10, lines 1-56); and

Kurowski does not expressly disclose means for refraining from embedding an already watermarked signal.

However, Nakano discloses an electronic watermark insertion device comprising means for refraining from embedding the selected watermark in response to said watermark detector detecting said selected watermark in the information signal (Col. 7, Page 17-36).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teachings of Kurowski with the teachings of Nakano to include the means to prevent electronic watermark data to be inserted into the input image more than once with the motivation to prevent degradation in image quality (Nakano, Col. 4, lines 18-40).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cox et al., U.S. Patent No. (5,991,426),

Cox et al., U.S. Patent No. (5,915,027),

Tewfik et al., U.S. Patent No. (6,226,387),

Haitsma et al., U.S. Patent No. (6,505,223),

Wu et al., U.S. Patent No. (6,285,775), and

Rhoads, U.S. Patent No. (6,381,341).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arezoo Sherkat whose telephone number is (703) 305-8749. The examiner can normally be reached on 8:00-4:30 Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arezoo Sherkat
Patent Examiner
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February 5, 2004



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